

## ABSTRACT OF THE DISCLOSURE

In order to reduce distortion in playout of audio received in a packet over a packet network, the playout unit needs to determine the relative delay of adjacent packets, jitter, present in the network. The jitter is used to determine buffering for smoothing playout of audio in a packet network. The jitter in packets received from a packet network is calculated based upon the arrival time of a packet, the length of the packet and the arrival time of a subsequent packet. The receiving gateway notes the arrival time of a packet. The length of the audio payload is determined from the size of the payload and the codec used to encode the payload. The length of the payload is added to the arrival time to determine the anticipated arrival of the next subsequent packet. The actual arrival time is noted and the difference between anticipated arrival and actual arrival is used to determine jitter. The present invention is protocol independent because jitter is determined without reference to any time stamp information which may be or may not be contained in a header for certain protocols. The present invention can be implemented in a wider variety of environments because jitter can be calculated without reference to the network packet time stamp.